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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,696	05/23/2001	Kimio Amemiya	107156-00068	2341

7590 11/20/2002

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EXAMINER

COLON, GERMAN

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/862,696

Applicant(s)

AMEMIYA ET AL.

Examiner

German Colón

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-- The MAILING DATE of this communication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13-15, 17, 19, 21-30, 33, 35, 40-43, 48-50 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 12, 16, 18, 20, 31-34, 36-39, 44-47 and 51 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachm nt(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities:

On lines 2-3 the claim recites “a visible region light emissive layer for of a visible light emitting phosphor”; further it claims “said layer allowing continuous radiation of ultraviolet light”. It is unclear whether it is claimed a layer (phosphor) which can emit in both visible and ultraviolet region of the spectrum, or just in one of the regions. The Examiner notes that for the purpose of examination the layer was considered as one capable of emitting in both region of the spectrum.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1, 2, 4, 5, 22, 23, 26, 28 and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Justel et al. (US Patent Application Pub. 2001/0024088).

Regarding claim 1, Justel discloses a PDP including a front substrate **3** and a back substrate **2** on opposite sides of a discharge space, a plurality of row electrode pairs **6,7** arranged

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in a column direction on the front substrate to form display lines, a protective dielectric layer **4** provided on a face of the front substrate, a plurality of column electrodes **11** arranged in the row direction on the back substrate to form a unit light emitting area in the discharge space, a phosphor layer **10** on a face of the back substrate, said PDP comprising a priming particle generating member **8** provided at a site facing each unit light emitting area between the substrates.

Regarding claim 2, Justel discloses the priming particle generating member being made up of an ultraviolet region light emissive layer formed of an ultraviolet region light emitting phosphor having persistence characteristics (see Col. 2, paragraph [0008]).

Referring to claim 4, Justel discloses the UV region light emitting layer extending in the row direction, facing toward the discharge space (see Fig. 1).

Referring to claim 5, Justel discloses the UV region light emitting layer extending in the column direction, facing toward the discharge space (see Fig. 1).

Regarding claims 22, Justel discloses the UV region light emitting layer extending in the row direction, facing toward the discharge space (see Fig. 1).

Referring to claim 23, Justel discloses the UV region light emitting layer extending in the column direction, facing toward the discharge space (see Fig. 1).

Regarding claim 26, Justel discloses stripe-patterned partition walls **13** disposed between the front substrate and back substrate, wherein said priming particle generating member extends in the row direction (see Fig. 1).

Regarding claim 28, Justel discloses a PDP including a front substrate **3** and a back substrate **2** on opposite sides of a discharge space, a plurality of row electrode pairs **6,7** arranged

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in a column direction on the front substrate to form display lines, a protective dielectric layer **4** overlaying the row electrodes, a protective dielectric layer **5** overlaying the dielectric provided on a face of the front substrate, a plurality of column electrodes **11** arranged in the row direction on the back substrate to form a unit light emitting area in the discharge space, said PDP comprising a priming particle generating member **8** provided at a site facing each unit light emitting area between the substrates.

Regarding claim 42, Justel discloses partition walls **13** disposed between the front substrate and back substrate, wherein said priming particle generating member is placed on a front face of the partition wall, facing the discharge space (see Figs. 1 and 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 7, 8, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al. (US6,008,582) in view of Justel et al. (US Patent Application Pub. 2001/0024088).

Regarding claim 1, Asano discloses a PDP including a front substrate **10** and a back substrate **3** on opposite sides of a discharge space, a plurality of row electrode pairs **4,5** arranged in a column direction on the front substrate to form display lines, a protective dielectric layer **6** provided on a face of the front substrate, a plurality of column electrodes **8** arranged in the row

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direction on the back substrate to form a unit light emitting area in the discharge space, and a phosphor layer 2 on a face of the back substrate. Asano fails to disclose a priming particle generating member provided at a site facing the discharge area.

However, in the same field of endeavor, Justel discloses a PDP comprising a priming particle generating member facing a discharge space with the purpose of increasing the UV photons that will excite the phosphor, thus improving the luminance of the PDP (see Cols. 1 and 2, paragraphs [0004] and [0010]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the PDP of Asano with the priming particle generating member of Justel, in order to increase the UV photons that will excite the phosphor, thus improving the luminance of the PDP.

Regarding claim 2, Asano-Justel discloses the priming particle generating member being made up of an ultraviolet region light emissive layer formed of an ultraviolet region light emitting phosphor having persistence characteristics (see Justel, Col. 2, paragraph [0008]).

Regarding claim 7, Asano-Justel discloses a partition wall disposed between the front substrate, and including transverse wall extending in the row direction and vertical walls extending in the column direction to partition the discharge space (see Asano, Figs. 4 and 5) into light emitting areas, wherein said ultraviolet region light emissive layer is provided between the front substrate and the transverse walls of the partition wall (see Fig. 4 of Asano in view of Fig. 1 of Justel).

Regarding claim 8, Asano-Justel discloses a partition wall disposed between the front and back substrates, and including transverse walls extending in the row direction and vertical walls extending in the column direction to partition the discharge space (see Asano, Figs. 4 and 5) into

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light emitting areas, wherein said ultraviolet region light emissive layer is provided between the front substrate and the vertical walls of the partition wall (see Fig. 4 of Asano in view of Fig. 1 of Justel).

Referring to claim 24, Asano-Justel discloses a partition wall disposed between the front and back substrates, and including transverse walls extending in the row direction and vertical walls extending in the column direction to partition the discharge space (see Asano, Figs. 4 and 5) into light emitting areas, wherein said ultraviolet region light emissive layer is provided between the front substrate and the transverse walls of the partition wall (see Fig. 4 of Asano in view of Fig. 1 of Justel).

Referring to claim 25, Asano-Justel discloses a partition wall disposed between the front and back substrates, and including transverse walls extending in the row direction and vertical walls extending in the column direction to partition the discharge space (see Asano, Figs. 4 and 5) into light emitting areas, wherein said ultraviolet region light emissive layer is provided between the front substrate and the vertical walls of the partition wall (see Fig. 4 of Asano in view of Fig. 1 of Justel).

6. Claims 1-3, 6, 10, 28, 29, 35, 42, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto et al. (US 5,952,782) in view of Yamakawa (JP 09-263756).

Regarding claim 1, Nanto discloses a PDP including a front substrate **11** and a back substrate **21** on opposite sides of a discharge space, a plurality of row electrode pairs **X,Y** arranged in a column direction on the front substrate to form display lines, a protective dielectric layer **17** provided on a face of the front substrate, a plurality of column electrodes **A** arranged in

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the row direction on the back substrate to form a unit light emitting area in the discharge space, and phosphor layer 28 on a face of the back substrate. Nanto is silent regarding the phosphor layer of the PDP.

However, in the same field of endeavor, Yamakawa discloses a phosphor for a PDP, comprising a priming particle generating member with the purpose of providing a PDP with excellent luminous efficiency and high luminance. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the PDP of Nanto with the phosphor disclosed by Yamakawa in order to provide a PDP with excellent luminous efficiency and high luminance.

Regarding claim 2, Nanto-Yamakawa discloses the priming particle generating member being made up of an ultraviolet region light emissive layer formed of an ultraviolet region light emitting phosphor having persistence characteristics.

Referring to claim 3, Nanto-Yamakawa discloses the ultraviolet region light emissive layer formed of an ultraviolet region light emitting phosphor having persistence characteristics allowing radiation for 0.1 msec. The Examiner notes that Yamakawa discloses the UV light emitting phosphors being $\text{SrB}_4\text{O}_7\text{:Eu}$ or $\text{BaSi}_2\text{O}_5\text{:Pb}$ (see Tables 1 and 2) which have the claimed persistence characteristics.

Referring to claim 6, Nanto-Yamakawa discloses a light absorption layer provided at a portion of the dielectric layer (see Figs. 7 and 8 of Nanto).

Regarding claim 10, Nanto-Yamakawa discloses a phosphor that emits in the visible and ultraviolet regions of the spectrum, having persistence characteristics.

Regarding claim 28, Nanto discloses a PDP including a front substrate **11** and a back substrate **21** on opposite sides of a discharge space, a plurality of row electrode pairs **X,Y** arranged in a column direction on the front substrate to form display lines, a protective dielectric layer **17** overlaying the row electrodes, a protective dielectric layer **18** overlaying the dielectric layer provided on a face of the front substrate, a plurality of column electrodes **A** arranged in the row direction on the back substrate to form a unit light emitting area in the discharge space, and phosphor layer **28** on a face of the back substrate. Nanto is silent regarding the phosphor layer of the PDP.

However, in the same field of endeavor, Yamakawa discloses a phosphor for a PDP, comprising a priming particle generating member with the purpose of providing a PDP with excellent luminous efficiency and high luminance. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the PDP of Nanto with the phosphor disclosed by Yamakawa in order to provide a PDP with excellent luminous efficiency and high luminance.

Referring to claim 29, Nanto-Yamakawa discloses the ultraviolet region light emissive layer formed of an ultraviolet region light emitting phosphor having persistence characteristics allowing radiation for 0.1 msec. The Examiner notes that Yamakawa discloses the UV light emitting phosphors being $\text{SrB}_4\text{O}_7\text{:Eu}$ or $\text{BaSi}_2\text{O}_5\text{:Pb}$ (see Tables 1 and 2) which have the claimed persistence characteristics.

Regarding claim 35, Nanto-Yamakawa discloses a light absorption layer provided at a portion of the dielectric layer (see Figs. 7 and 8 of Nanto).

Regarding claim 42, Nanto-Yamakawa discloses a partition wall **29** disposed between the front substrate and the back substrate, wherein said priming particle generating member is placed on a front surface of the partition wall. The Examiner notes that the phosphor comprising the priming particle generating member overlays the partition walls.

Referring to claim 50, Nanto-Yamakawa discloses the ultraviolet region light emissive layer formed of an ultraviolet region light emitting phosphor having persistence characteristics allowing radiation for 0.1 msec.

7. Claims 1, 11, 13, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto et al (US 5,952,782) in view of Van Slooten (US 6,229,582).

Regarding claim 1, Nanto discloses a PDP including a front substrate **11** and a back substrate **21** on opposite sides of a discharge space, a plurality of row electrode pairs **X,Y** arranged in a column direction on the front substrate to form display lines, a protective dielectric layer **17** provided on a face of the front substrate, a plurality of column electrodes **A** arranged in the row direction on the back substrate to form a unit light emitting area in the discharge space, and phosphor layer **28** on a face of the back substrate. Nanto fails to disclose a priming particle generating member provided at a site facing the discharge area.

However, in the same field of endeavor, Van Slooten discloses a PDP comprising a priming particle generating member with the purpose of reducing the number of electrons and ions of the plasma that are lost at the walls of the discharge area and lowering the sustain current needed to maintain the plasma, thus reducing the energy consumption of the device (see Col. 2, lines 1-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to provide the priming particle generating member disclosed by Van Slooten in the PDP of Nanto, in order to reduce the number of electrons and ions of the plasma that are lost at the walls of the discharge area and lowering the sustain current needed to maintain the plasma, thus reducing the energy consumption of the device.

Regarding claim 11, Nanto-Van Slooten discloses the priming particle generating member being made up of a secondary electron emissive layer (see Col. 1, line 60, of Van Slooten).

Referring to claim 13, Nanto-Van Slooten discloses a partition wall (29 of Nanto) between the substrates, wherein said secondary electron emissive layer is provided on a side wall face of the partition wall (see Col. 1, lines 58-60, of Van Slooten).

Referring to claim 14, Nanto-Van Slooten discloses a partition wall (29 of Nanto) between the substrates, wherein said secondary electron emissive layer is provided on a side wall face of the partition wall having a coefficient of secondary electron emission higher than the protective dielectric layer (see Col. 1, lines 58-60, and Col. 2, lines 15-34 of Van Slooten).

Regarding claim 15, Nanto-Van Slooten discloses the electron emissive layer being placed between the back substrate and the phosphor layer. The Examiner notes that Van Slooten teaches to provide the partition walls with the electron emissive layer and Nanto provides the discharge area with the phosphor covering the partition walls.

8. Claims 17, 19, 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanto-Van Slooten as applied to claim 1 above, and further in view of Yamakawa (JP 09-263756).

Nanto-Van Slooten is silent regarding the phosphor of the PDP. However, in the same field of endeavor, Yamakawa discloses a phosphor for a PDP, comprising a priming particle generating member with the purpose of providing a PDP with excellent luminous efficiency and high luminance. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the PDP of Nanto-Van Slooten with the phosphor disclosed by Yamakawa in order to provide a PDP with excellent luminous efficiency and high luminance.

Regarding claim 19, Nanto-Van Slooten-Yamakawa discloses a phosphor layer containing the UV region light emitting phosphor.

Regarding claim 21, Nanto-Van Slooten-Yamakawa discloses a phosphor layer having persistence characteristics allowing radiation for 0.1 msec or more.

Referring to claim 27, Nanto-Van Slooten-Yamakawa discloses a light absorption layer provided at a portion of the dielectric layer (see Figs. 7 and 8 of Nanto).

9. Claims 28, 40, rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya et al. (US 5,742,122) in view of Justel et al. (US Patent Application Pub. 2001/0024088).

Regarding claim 28, Amemiya discloses a PDP including a front substrate **1** and a back substrate **2** on opposite sides of a discharge space, a plurality of row electrode pairs **S, Sa** arranged in a column direction on the front substrate to form display lines, a protective dielectric layer **23** overlaying the row electrodes, a protective dielectric layer **24** overlaying the dielectric layer provided on a face of the front substrate, a plurality of column electrodes **W** arranged in the row direction on the back substrate to form a unit light emitting area in the discharge space, and

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phosphor layer 11 on a face of the back substrate. Amemiya fails to disclose a priming particle generating member.

However, in the same field of endeavor, Justel discloses a PDP comprising a priming particle generating member facing a discharge space with the purpose of increasing the UV photons that will excite the phosphor, thus improving the luminance of the PDP (see Cols. 1 and 2, paragraphs [0004] and [0010]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the PDP of Amemiya with the priming particle generating member of Justel, in order to increase the UV photons that will excite the phosphor, thus improving the luminance of the PDP.

Referring to claim 40, Amemiya-Justel disclose an additional portion provided at a portion of the dielectric layer and jutting toward the interior of the discharge space (see Amemiya, Fig. 2, reference 23a) wherein a priming particle generating member is disposed on that portion (see Fig. 2 of Amemiya in view of Justel).

10. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya-Justel as applied to claim 40 above, and further in view of Nanto et al. (US 5,952,782).

Amemiya-Justel disclosed the claimed invention except for the limitation of “a light absorption layer provided at a portion of the dielectric”. However, in the same field of endeavor, Nanto discloses a PDP where an absorption layer is provided with the purpose of improving the contrast of the display reducing the scattering of external light in bright places. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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provide the PDP with an absorption layer in order to improve the contrast of the display reducing the scattering of external light in bright places.

11. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya-Justel as applied to claim 40 above, and further in view of Yamakawa (JP 09-263756).

Amemiya-Justel is silent regarding the phosphor of the PDP. However, in the same field of endeavor, Yamakawa discloses a phosphor for a PDP, comprising a priming particle generating member with the purpose of providing a PDP with excellent luminous efficiency and high luminance. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the PDP of Amemiya-Justel with the phosphor disclosed by Yamakawa in order to provide a PDP with excellent luminous efficiency and high luminance. The Examiner notes that the phosphor disclosed by Yamakawa have persistence characteristics allowing emission for 0.1 msec or more.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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13. Claims 28, 29, 30 and 48 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-8 of U.S. Patent No. 6,344,715 in view of Van Slooten (US 6,229,582).

US Application SN 09/862,696	US Patent No. 6,344,715	Reasons for rejecting under obviousness type double patenting
Claim 28	Claim 5 in view of Slooten	<p>Same subject matter. Patent '715 claims a PDP including a front substrate and a back substrate on opposite sides of a discharge space, a plurality of row electrode pairs arranged in a column direction on the front substrate to form display lines, a protective dielectric layer overlaying the row electrodes, provided on a face of the front substrate, a plurality of column electrodes arranged in the row direction on the back substrate to form a unit light emitting area in the discharge space, said PDP comprising a priming particle generating member provided at a site facing each unit light emitting area between the substrates.</p> <p>Patent '715 is silent regarding the limitation of "a protective dielectric layer overlaying the dielectric provided on a face of the front substrate". However, in the same field of endeavor, Van Slooten discloses a PDP with a protective dielectric layer with the purpose of providing high stability against ion and electron bombardment. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a protective dielectric layer in order to provide high stability against ion and electron bombardment.</p>
Claim 29	Claim 6 in view of Van Slooten	Same subject matter. Patent '715 claims a priming particle generating member formed of an UV light emissive material having persistence characteristics allowing emission for 0.1 msec.
Claim 30	Claim 8 in view of Van Slooten	Same subject matter. Patent '715 claims a priming particle generating member having a work function smaller than that of the dielectric.
Claim 48	Claim 5 in view of Slooten	Same subject matter. Patent '715 claims a discharge gas including a mixed inert gas containing 10% or more of xenon gas.

Allowable Subject Matter

13. Claims 9, 12, 16, 18, 20, 31-34, 36-39, 44-47 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 9, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 9 and specifically comprising the limitation of “a row electrode including a main body extending in the row direction and a protruding portion in the column direction where said UV emissive layer extends in the row direction at each position opposing the row electrodes”.

Regarding claim 12, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 12 and specifically comprising the limitation of “a phosphor layer containing the material having the coefficient of secondary electron emission higher than the protective dielectric layer”.

Referring to claim 16, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 16 and specifically comprising the limitation of “a dielectric layer overlaying the column electrodes containing the material having the coefficient of secondary electron emission higher than the protective dielectric layer”.

Referring to claim 18, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 18 and specifically comprising the

limitation of “the UV light emissive layer containing the material having a high coefficient of secondary electron emission:.

Referring to claim 20, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 20 and specifically comprising the limitation of “the phosphor layer containing the UV light emitting phosphor and the material having a coefficient of secondary electron emission higher than the protective dielectric layer”.

Regarding claim 31, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 20 and specifically comprising the limitation of “a communication element provided for communicating between the interior of said interstice and the interior of the discharge spaces”.

Regarding claims 32-34, 36-39, and 45-47, claims 32-34, 36-39, and 45-47 are allowed for the reasons stated in claim 31 because of their dependency status on claim 31.

Regarding claim 44, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 20 and specifically comprising the limitation of “the priming particle generating member having a work function smaller than the dielectric forming the protective dielectric layer”.

Regarding claim 51, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 51 and specifically comprising the limitation of “the priming particle generating member having a work function of 4.2 or less”.

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Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Shin et al., in WO 01/39239 A1, discloses a PDP comprising a UV-emitting phosphor layer.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 703-305-5987. The examiner can normally be reached on Monday thru Friday, from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


gc

November 18, 2002



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800